REMARKS

In view of the above amendments and the following remarks, reconsideration of the rejections and further examination are requested. Upon entry of this amendment, the abstract is amended, claims 1, 3, 4, 6-12, 14 and 15 are amended, and claims 20 and 21 are added, leaving claims 1-21 pending with claims 1 and 12 being independent. No new matter has been added.

Applicants note that the claims have been amended to clarify the terms thereof and have not been amended to overcome any prior art.

Rejections Under 35 U.S.C. §103(a)

Claims 1-11 and 16-18 have been rejected under 35 U.S.C. §103(a) as being unpatentable over JP 2003-262217 in view of Shimpuku et al. (US 5,750,616) and Yasuda (US 2003/0164653).

Applicants respectfully traverse this rejection and submit that the claims as currently pending are allowable over the cited prior art. Specifically, independent claim 1 recites a fluid dynamic bearing device, comprising a radial bearing portion configured to retain a rotating member and a stationary member in a radial direction in non-contact fashion by dynamic pressure action of a fluid generated in a radial bearing gap between the rotating member and the stationary member, and a thrust bearing portion configured to retain the rotating member and the stationary member in a thrust direction in non-contact fashion by dynamic pressure action of the fluid generated in the thrust bearing gap between the rotating member and the stationary member.

The cited prior art fails to disclose or render obvious such a device. In particular, JP 2003-262217 discloses forming a thrust bearing gap between the upper end surface of the thrust plate 2d and the lower end surface of the sleeve 8, and between the lower end surface of the thrust plate 2d and the upper end surface of the thrust bush 16. A spiral groove 28a is formed in the lower end surface of the rotor 2 (*see* Figs. 2 and 4). The spiral groove 28a induces a radially inward pressing force that is applied to the oil in the gap, so as to prevent oil running into the tapered sealing portion due to the centrifugal force acting on the oil filled in the gap between the lower end surface of the rotor 2 and the upper end surface of the housing 6 (*see* paragraphs [0052] and [0054]). Therefore, JP 2003-262217 fails to disclose that a thrust bearing gap is formed between the rotor (e.g. the lower end surface) and the housing stationary member (e.g.

the upper end surface). That is, according to paragraph, "the spiral groove 28a does not generate a dynamical pressure for stabilizing the axial position of the rotor 2", thereby notifying one skill in the art that the gap between the lower end surface of the rotor and the upper end surface of the housing 6 is not a thrust bearing gap.

Yasuda discloses a thrust bearing portion for supporting the thrust load that is formed such that the end surface of the rotor shaft 11c contacts the thrust plate 130b (*see* paragraph [0047]). However, Applicants submit that there is no thrust bearing gap disposed in any part of the Yasuda structure, including the space between the rotor 11 and the bearing house 13b. Therefore, as with JP 2003-202217, Yasuda fails to disclose the recited thrust bearing gap. Moreover, Yasuda fails to disclose that at least a portion of the stationary member and at least a portion of the rotating member face the thrust bearing gap and are formed of resin, as recited in claim 1 of the present application.

Shimpuku merely discusses a fiber-reinforced thermoplastic resin composite material and fails to overcome the deficiencies of Yasuda and JP 2003-262217 discussed above.

Therefore, Applicants submit that the cited prior art fails to disclose or render obvious each of the elements of the independent claim 1.

Additionally, there is no reasoning in the prior art to modify JP 2003-262217, Shimpuku or Yasuda, such that the combination thereof would have rendered independent claim 1 obvious. Therefore, independent claim 1 and its dependent claims are allowable over the cited prior art.

Claims 12-15 and 19 have been rejected under 35 U.S.C. §103(a) as being unpatentable over JP 2003-262217 and in view of Fujinaka (US 6,832,853).

Applicants respectfully traverse this rejection and submit that the claims as now pending are allowable over the cited prior art. In particular, independent claim 12 recites a fluid dynamic bearing device comprising a rotating member configured to rotate relative to a bearing sleeve and a housing, the rotating member being arranged relative to the bearing sleeve so as to form a radial bearing gap therebetween, and arranged relative to the housing so as to form a thrust bearing gap therebetween, wherein the housing constitutes a thrust bearing portion and has a thrust bearing surface in which dynamic pressure grooves are formed and a fixation surface to which a metal member is fixed, and wherein the housing has a portion including the thrust

bearing surface and formed of a resin material, and a portion including the fixation surface formed of a metal material.

The cited prior art fails to disclose or render obvious such a device. In particular, as described above, in JP 2003-262217, each of the lower end surface of the sleeve 9, the upper end surface of the thrust bush 16, and the upper and lower surfaces of the thrust plate 2d serves as the thrust bearing surface. However, JP 2003-262217 does not disclose the materials from which these end surfaces are made, thus, JP 2003-262217 fails to disclose the structure that the housing has a portion including the thrust bearing surface formed of resin, as required by claim 12.

Additionally, in Fujinaka, the thrust bearing portion is formed by having the shaft end portion contact the thrust plate 7 in all of the embodiments. Thus, Fujinaka also fails to disclose that the housing has a portion including the thrust bearing surface is formed of resin.

Moreover, there is no reasoning in the prior art to modify JP 2003-262217 or Fujinaka, such that the combination thereof would have rendered independent claim 12 obvious. Therefore, independent claim 12 and its dependent claims are allowable over the cited prior art.

New Claims

New claims 20 and 21 are allowable for the reasons set forth above, since they are dependent from independent claims 1 and 12, respectively. Moreover, each of these claims recites additional subject matter that further distinguishes it over the prior art. For example, claim 12 recites that both of the at least a portion of the stationary member and the at least a portion of the rotating member are blended with reinforcement fibers of a fiber diameter 1 to 12 μm as a filler.

The cited prior art fails to disclose or render obvious such a claim element. In particular, in claim 20, the recited diameter of the reinforcement fiber enables contact of the fiber with the sliding surfaces to be less aggressive. When the fiber is mixed with the resin portions in both the rotating member and the stationary member, each of these sliding portions can reduce abrasion on the other portion, resulting in less abrasion in the two members sliding against each other. This claim element is neither disclosed nor rendered obvious by the cited prior art.

With regard to claim 21, claim 21 recites that the housing includes a resin portion having the thrust bearing surface and a cylindrical metal portion having the stationary surface, the metal portion has a first closed end part and a second opened end part, and a resin portion is disposed at

the second end part. Such a claim element is not disclosed nor rendered obvious by the cited prior art.

Conclusion

In view of the foregoing amendments and remarks, all of the claims now pending in this application are believed to be in condition for allowance. Reconsideration and favorable action are respectfully solicited.

Should the Examiner believe there are any remaining issues that must be resolved before this application can be allowed, it is respectfully requested that the Examiner contact the undersigned by telephone in order to resolve such issues.

Respectfully submitted,

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April 26, 2010